ABSTRACT OF THE DISCLOSURE

Desired engine fueling data FQL_MFD_TQL is processed by a derivative variable time function (40) embodied in an algorithm to develop a data value EGR_MFD_DER representing the time derivative of desired fueling. The algorithm comprises certain selectable parameters (EGR_DTS, EGR_MFD_KF, EGR_MFD_KD). An iteration of the algorithm includes processing FQL_MFD_TQL according to a first function (40A) to yield a first data value and according to a second function (40B) to yield a second data value. A third function (40C) subtracts the second data value from the first to yield a data value for the time derivative that forms one input to a map (42). A second input to the map is a data value for mass airflow (MAF_GMS). The map provides data for calculating the set point of an EGR valve (36). The invention provides improved control of EGR during fueling transients.